

## **DRAFT**

### **Example Stage 1 Implementation** **(Approximately First 7+ Years of Implementation)**

Stage 1 is defined as the period extending from certification of the programmatic EIS/EIR to just prior to making a decision whether or not to issue permits for the major storage and conveyance facilities. Agreement on Stage 1 actions is only one part of the decision for a preferred program alternative.

The following pages provide more detail on potential actions for Stage 1. The list of actions is intended as a starting point for discussions on potential Stage 1 implementation and will be frequently refined and updated with input from CALFED agencies and stakeholders. These actions will be more fully developed as parts of the preferred program alternative for the *Revised Draft Programmatic EIS/EIR* in late 1998 and for the *Final Programmatic EIS/EIR* in late 1999.

Each potential action in the following Stage 1 list includes an estimate (in parenthesis) of when the action may occur within Stage 1. For example, "(yr 1)" indicates the action will occur in the first year following certification of the EIS/EIR. (*NOTE: The actions that appear to be key to the Stage 1 implementation are shown in bold.*)

#### **Assurances**

*An assurances package is a set of actions and mechanisms to assure that the Program will be implemented and operated as agreed. The assurances package will include mechanisms to be adopted immediately as well as a contingency process to address situations where a key element of the plan cannot be implemented as agreed. While the assurances package will be substantially complete before beginning Stage 1, some details remain to be finalized early in Stage 1 after the federal Record of Decision and the state Notice of Determination.*

- Complete programmatic implementation plan (yr 1)
- Finalize coordination between agencies or new agency (yr 1-3); e.g., provide for ecosystem restoration authority within the individual CALFED agencies or in a new organization with responsibility for ecosystem restoration
- Refine conservation strategy (yr 1-3)
- **Negotiate final details of the assurances package and operational rules (yr 1-3)**
- **Introduce state and/or federal legislation if necessary for new institutional arrangements or Program implementation (yr 2-3); e.g., legislation to modify water transfer law and statutes to facilitate an appropriately protective water transfer framework**

- Implement a CALFED environmental documentation and permit coordination process (yr 1-7)
- Implement contingency response as needed (yr 1-7)

## Finance

*The financial package will seek to finance the preferred program alternative through a combination of federal, state, and user funds. This financing will continue over several decades as the various parts of the preferred program alternative are implemented, operated, and maintained. Stage 1 establishes the financial package for use in all stages.*

- **Establish reliable short-term and long-term funding for each Program element (1-7)**
  - Finalize cost share agreements (yr 1)
  - Finalize user fees (yr 1)
  - Seek federal authorization/appropriation and seek authority to sell state bonds (yr 1-7)

## Monitoring

*Establish monitoring for all program elements that focuses on obtaining data on a timely basis, providing interpretation of data, and maintaining data in an accessible and useful form. The monitoring, assessment of data, and resultant need for adaptive management are required throughout the CALFED Bay-Delta Program. The first stage establishes the monitoring system and procedures which will continue in subsequent stages.*

- Refine monitoring plan including all elements of the Program (yr 1)
- **Implement monitoring plan under direction of a single entity (yr 1-7)**
- Annual reports on status/progress (yr 1-7)
- Analysis of status and need for adjustments of actions for stage 2 (yr 5-7)
- Provide input to assist adaptive management in Program elements (yr 1-7); e.g., adaptive management for ecosystem restoration and water quality
- Feedback available on actual diversion effects of south Delta pumps (yr 2-7)
- Feedback available on need to reduce bromides (yr 5)

## Water Transfer Framework

*The water transfer framework is designed to improve the efficiency of the water transfer process. This will facilitate development of a statewide water transfer market while providing protection*

*from third party impacts and local groundwater or environmental impacts. This element will propose a policy framework for water transfer rules, baseline data collection, public disclosure, and analysis and monitoring of water transfers, both short- and long-term. The first stage implements the processes which will continue in subsequent stages.*

- **Establish clearinghouse to ensure public participation and disclose information, perform analysis of transfer impacts, and evaluate monitoring of actual transfer impacts (yr 1)**
- Continue clearinghouse functions to provide information on environmental, economic and water resource protections (yr 2-7); e.g., third party impacts, groundwater resource protection, instream flow [1707] transfers, environmental protection in source areas, area of origin/watershed priorities, and rules/guidelines for environmental water transfers
- **Establish technical, operational, and administrative rules that govern water transfer transactions (yr 1-4); e.g., transferable water and the "no injury rule", operations criteria and/or carriage water requirements, reservoir refill criteria, and streamlined permitting process**
- Establish disclosure process that provides information regarding potential access to state and federal water facilities for movement of water transfers (yr 2); e.g. priority of transferred water in existing project facilities, priority of transferred water in new facilities, wheeling costs

## Water Use Efficiency

*The CALFED water use efficiency element focuses on formulation of policies which support implementation of efficiency measures at the local and regional level. The policy is a reflection of the State of California legal requirements for reasonable and beneficial use of water. The role of CALFED agencies in water use efficiency will be twofold: First, they will offer support and incentives through expanded programs to provide planning, technical, and financial assistance. Second, the CALFED agencies will provide assurances that cost-effective efficiency measures are implemented. The first stage implements the processes which will continue in subsequent stages.*

- **Expand DWR and USBR programs to provide technical and planning assistance to local agencies and explore new ways of developing assistance and involving other CALFED agencies (yr 1-7)**
- Introduce state legislation (amend the water code) to give DWR approval authority for urban water management plans (yr 1-3); e.g., approved plans would be a condition for urban areas receiving CALFED benefits
- Review and approve urban water management plans (yr 1-7); assumes DWR has overall authority but that approval of plans for best management practices (under urban MOU) would be deferred to Urban Council as shown in the following two

## bullets

- Introduce state legislation to give Urban Council authority to certify water agency implementation plans (under urban MOU) for best management practices (yr 1-3)
- Implement urban MOU process fully with certification of agency implementation plans (yr 3-7)
- Implement the Agricultural Water Management Council (AB 3616) process fully with endorsement of agency plans (yr 1-7); e.g., rely on Council to endorse plans of signatory member agencies as condition for receiving CALFED benefits, explore additional ways to build consensus on the process
- Seek resolution to legal, institutional, and funding limitations for water recycling (yr 1-3)
- **Participate in conservation and water recycling demonstration projects** (yr 3-7); e.g., funding assistance for projects providing multiple CALFED benefits such as agricultural tail water recycling which could benefit fish by reducing diversions, reduce pollutant loading, etc.

**Levees**

*The focus of the long-term levee protection element of the Program is to reduce the risk to land use and associated economic activities, water supply, infrastructure, and the ecosystem from catastrophic breaching of Delta levees. Levee protection is an ongoing effort which consists of:*

- *Base level funding to provide distributed funding to participating local agencies*
- *Funding of special improvement projects for habitat and levee stabilization to augment the base-level funding*
- *Grant projects to develop best management practices for subsidence control*
- *An advanced measures plan and emergency management plan to more effectively plan for and deal with potential levee disasters*
- *A seismic risk assessment to evaluate performance of the existing levee system during seismic events*

*The first stage begins the decades-long process to improve reliability of Delta levees.*

- Obtain short-term federal and state funding authority as a bridge between the existing Delta Flood Protection authority (AB360) and long-term levee funding (yr 1-5)
- Obtain long-term federal and state funding authority (yr 1-7); e.g., the Corps of Engineers' current Delta Special Study would develop into a long-term Delta levee reconstruction program and the state would be the local cost sharing partner
- Maintain current federal cost-sharing of 65% and establish state and local cost sharing percentages (yr 1)
- Project level environmental documentation and permitting as needed (yr 1-7)

- Develop levee designs that minimize the need for continuous disruption of habitat from levee maintenance and minimize the need for ongoing mitigation from disrupted habitat (yr 1-7)
- **Fund levee improvements up to PL84-99, approx. \$114 million [\$74 million during years 1 through 5 and \$40 million during years 6 through 7] in first stage (yr 1-7); e.g., proportionally distribute available funds to entities making application for cost sharing of Delta levee improvements**
- **Further improve levees which have significant statewide benefits approx. \$82 million [\$58 million during years 1 through 5 and \$24 million during years 6 through 7] in first stage (yr 1-7) ; e.g., statewide benefits to water quality, highways, etc.**
- Coordinate Delta levee improvements with ecosystem improvements (yr 1-7)
- Coordinate Delta levee improvements with Stage 1 water conveyance improvements and with potential conveyance improvements in subsequent stages (yr 1-7)
- Institute Advanced Measures Plan and Emergency Management Plan (yr 1-7); e.g., establish \$10 million revolving fund, refine command and control protocol, preposition flood fighting supplies, establish standardized contracts for flood fighting and recovery operations
- Initiate a subsidence control program to develop and implement BMP's, approx. \$11 million for Stage 1 (yr 1-7)

## Ecosystem Restoration

*The CALFED ecosystem restoration plan (ERP) is designed to improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species. A foundation of this program element is the restoration of ecological process associated with streamflow, stream channels, watersheds, and floodplains. Ecosystem restoration is designed to improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species. Adaptive management, scientific oversight, and program review will guide implementation of the ERP over the 20 to 30 year implementation period. The Stage 1 restoration efforts are a continuation of existing CALFED ecosystem efforts and focus on reducing direct mortality and other actions that provide early benefit to the ecosystem. The initial focus of restoration activities will be on existing public lands.*

- Project level environmental documentation and permitting as needed (yr 1-7)
- Establish a partnership with a university and fund focused research (yr 1-7); e.g., hatchery management research
- Full coordination with other ongoing [and overlapping] activities which address ecosystem restoration in the Bay-Delta system (yr 1-7); e.g., CVPIA, Four Pumps

- Agreement, etc.
- **Develop habitat restoration on public lands where restoration of CALFED objectives is feasible (yr 1-7); e.g., management direction for existing public lands on Twitchell and Sherman Islands**
- Identify funding source for ongoing inflation indexed operational funds
- Continue high priority actions that reduce stressors of direct mortality (yr 1-7):
  - **Begin screening Sacramento River and tributary diversions less than 100 cfs**
  - **Screen 10-15 San Joaquin River and tributary diversions greater than 100 cfs**
  - Facilitate decisions on harvest management; e.g. work with Pacific Fishery Management Council for marking of hatchery product and requirements for anglers to return unmarked fish
  - Remove select physical barriers to fish passage
- Implement demonstration projects for habitat improvement
  - **Demonstration projects for habitat restoration of approximately 6000 to 7000 acres (riparian, tidal wetlands, seasonal wetlands, wildlife friendly agricultural practices, etc. for fish and wildlife) along the South Fork Mokelumne River corridor; e.g., Canal Ranch, Brack Tract, McCormack Williamson Tract, easements on Staten Island (if willing local participants)**
  - **Demonstration projects for habitat restoration (riparian, tidal wetlands, regrading to reduce fish stranding, etc. for fish and wildlife) in Yolo Bypass corridor; e.g., easements along Tule Canal, some acquisitions along Cache Slough, acquire Little Holland, management direction for Liberty and Prospect Islands**
  - **Demonstration projects for habitat restoration (riparian, attached berms and shallows, etc. to provide more shading, refuge, and residence time) along the mainstem San Joaquin River corridor within the legal Delta**
  - Coordinate ecosystem improvements with Delta levee improvements for the South Fork Mokelumne River corridor, the Yolo Bypass corridor, the San Joaquin River corridor, and with other levee improvements that provide habitat connectivity and value to overall ecosystem restoration plan; avoid habitat improvements along corridors that could become water conveyance corridors in subsequent stages
- Incorporate ecosystem improvements with subsidence reversal plans (yr 1-7)
- **Begin development of ecosystem water market (potentially \$20 million per year), after an appropriately protective water transfer framework has been established (yr 1-7); e.g., acquire 100,000 acre-feet on long-term basis and plan for other short-term purchases**
- Begin purchase of Sacramento River meander corridor easements [primarily easements with some acquisitions and habitat restoration] (yr 3-7)

- Begin select Sacramento River corridor habitat restoration (yr 3-7)
- Continue flood plain easements along San Joaquin River (yr 4-7); e.g., there may be more opportunities for easements if Corps of Engineers proceeds with flood plan
- Continue gravel management (yr 5-7); e.g., isolate gravel pits on San Joaquin River tributaries and relocate gravel operations on Sacramento River tributaries (most gravel work would be implemented in subsequent stages with designs and plans for ecosystem reclamation of gravel mining sites)
- Improve monitoring, detection, and control of exotic species (yr 1-7); e.g., border inspections, balanced management, water hyacinth control, funded early response
- Continue scientific evaluations (yr 1-7)
- Willing seller land acquisition for multiple uses (yr 2-7)

## Water Quality

*The water quality program will consist of a wide variety of actions to provide good water quality for environmental, agricultural, drinking water, industrial, and recreational beneficial uses of water. The majority of current water quality actions rely on comprehensive monitoring and research to improve understanding of effective water quality management and on the ultimate control of water quality problems at their sources. The Stage 1 water quality effort focuses on reducing constituents contributing toxicity to the ecosystem and affecting water users.*

- Project level environmental documentation and permitting as needed (yr 1-7)
- Develop educational programs relating to urban and agricultural runoff (yr 2-7); e.g., point-of-sale literature packaged with pesticide and herbicide materials, educate applicators on proper use of pesticides and herbicides, etc.
- **Initiate high priority water quality improvement actions** (yr 3-7); e.g. for mercury, copper, selenium, pesticides, and organic carbon
- Studies/testing/pilot evaluations (yr 1-7); e.g., research Cache Creek mercury issues including habitat restoration potential for contributions to methyl mercury formation, research ecological effects of toxicants, research impacts of ecosystem restoration on organic carbon, research on reducing impacts of agricultural and urban discharges
- **Implementation of needed actions based on results of the studies/testing/pilot evaluations** (yr 3-7)
- Participate in toxic site remediation if federal "Good Samaritan" protections are obtained (yr 3-7)

## Watershed Management

*Watershed management is a broad term used to describe diverse actions that maintain or*

*improve environmental conditions and resource management throughout a watershed. This program element is primarily a coordination effort with local watershed groups. The watershed coordination element also provides a focus for public participation for other Program elements. CALFED will participate where proposed watershed actions provide a strong link to critical Delta problems; expect \$10 million to \$15 million annually. The implementation ownership of the watershed work is with the local groups.*

- Develop a coordination framework to define roles and ensure effective communication among state, federal, local government, and stakeholder groups (yr 1); e.g., \$ and coordination to help local resource conservation districts develop consistent standards
- Develop a plan to foster local watershed groups (yr 1-2); e.g., formal MOU or other agreement with functional groups in each ecological zone of ERPP (such as Yolo Basin Foundation, Deer Creek Conservancy, etc.)
- **Provide stewardship funds to foster local watershed groups (yr 1-7)**
- Select a university to manage technical input to a clearinghouse function (yr 1)
- **Establish clearinghouse to assist watershed groups with information about funding opportunities, technical assistance, and project implementation (yr 1);** e.g. continuous review and input to existing watershed inventories, databases
- Develop performance measures which show the level of success or failure for use in adjusting future watershed participation (yr 1-2)
- Identify priority watersheds in terms of solutions to problems affecting the Bay-Delta estuary and develop implementation schedule tied with other Program elements (yr 2-7); e.g., priorities for fire control, meadow restoration vegetation management, protecting source water quality, reduce erosion, control exotic species, etc.
- Identify funding opportunities (pool agency money, grants, cost share, etc.) to provide incentives to local level for select upper watershed projects (yr 2-7); e.g., Plumas County, Placer County, El Dorado County, etc.

## Storage

*New storage for water may or may not be included in the preferred alternative. Storage of water in surface reservoirs or groundwater basins can provide opportunities to improve the timing and availability of water for all uses. The following storage actions will depend on selections in the preferred alternative and how the predefined conditions are met as time progresses. However, the first stage for storage is relatively independent of the storage in the preferred alternative.*

**Groundwater Banking and Conjunctive Use** - *This is primarily a coordination effort with local implementing entities. This first stage includes construction of several projects. Additional projects, if feasible, could be constructed in later stages.*



- Develop and implement a framework for conjunctive use (yr 1)
- Provide funding assistance for groundwater plan development (yr 1-7)
- Identify local cooperating entities and CALFED role (yr 1-3)
- Initiate baseline monitoring and modeling (yr 1-5)
- **Initiate demonstration project** (yr 1); e.g., Madera Ranch, American Basin
- Initiate field and pilot studies (yr 2-7)
- Project environmental documentation and permitting (yr 3-7)
- Designs (yr 4-7)
- **Construct 2 to 3 facilities** (yr 5-7); e.g. expanded Kern water bank

*Surface Storage - Surface storage could be constructed upstream of the Delta, in or near the Delta, and/or storage fulfilled by diversions through the Delta Mendota Canal or the California Aqueduct. This first stage will primarily consist of studies and evaluations necessary prior to final permitting. This will allow surface storage projects to be ready for permitting and construction in later stages should the projects be selected for implementation.*

- Identify local cooperating entities and CALFED role (yr 1-3)
- Environmental documentation (yr 1-5)
- Feasibility studies (yr 1-5)
- Field and pilot studies (yr 1-5)
- 404(b)(1) analyses; project site screening, least cost evaluations, and equivalency analyses (yr 1-5)
- Site selection (yr 5-6)
- Permits and operating agreements (yr 5-7)
- Evaluate improvements to Tehama Colusa Canal and others (yr 1-5)

## Conveyance

*The conveyance element describes the configurations of Delta channels and related facilities for moving water through the Delta and to the major export facilities in the southern Delta:*

- *The Delta channels could be maintained essentially in their current configuration with some improvements in the southern Delta.*
- *Significant improvements to northern Delta channels would accompany the southern delta improvements contemplated under the existing system conveyance above.*
- *The dual Delta conveyance is formed around a combination of modified Delta channels and a new canal or pipeline connecting the Sacramento River in the northern Delta to the SWP and CVP export facilities in the southern Delta.*

*The following draft conveyance actions will depend on selections in the preferred alternative and how the predefined conditions are met as time progresses. However, the first stage for conveyance is relatively independent of the conveyance in the preferred alternative. Much of this first stage will consist of studies and evaluations necessary prior to final permitting the major conveyance features. This will allow conveyance projects to be ready for permitting and construction in later stages should the projects be selected for implementation. Some construction on the South and North Delta improvements could occur within the first stage.*

**South Delta Improvements (Alts. 1, 2, and 3)** *South Delta improvements consist of methods to control south Delta stage and circulation issues, improved fish screen and salvage facilities, and SWP/CVP intertie. Stage 1 will complete methods to control stage and circulation issues and will provide fish screening demonstration projects for use in designing the permanent south Delta fish screening facility. Stage 1 will also complete design of the intertie.*

- Complete environmental documentation and permitting (yr 1-2)
- Design south Delta improvements (yr 1)
- **Construct south Delta improvements [expand permitted south Delta pumping capacity from 11,000 to 15,000 cfs] (yr 2-4)**
- **Construct fish screen demonstration project [full module of approximately 2500 cfs] for Tracy Pumping Plant (yr 1)**
- **South Delta screening demonstration project [full module at north end of Clifton Court] (yr 2-6)**
- Project environmental documentation and permitting for SWP/CVP intertie (yr 2-4)
- Design SWP/CVP intertie (yr 5-6)

**North Delta Improvements (Alt. 2 and possibly Alt. 3)** *North Delta improvements consist of a new screened diversion at Hood and significant channel modifications including setback levees. The screened diversion and associated channels may be implemented in modular stages in order to resolve technical screening and fish passage issues at the appropriate scale. Stage 1 will focus on studies and design prior to construction. Select channel improvements may be constructed but the majority of the improvements, if any are selected, will be constructed in Stage 2.*

- Project environmental documentation (yr 1-5)
- Feasibility studies for screened diversion and fish passage facilities, channel modifications, and habitat improvements (yr 1-5)
- Field and pilot studies (yr 1-5)
- Environmental documentation for land acquisition (yr 2-3)
- Land acquisition (yr 4-6)
- 404(b)(1) analyses; project site screening (yr 1-6)

- Permits and operating agreements (yr 4-6)
- Design of select improvements (yr 4-6)
- **Construct select improvements (yr 7)**
- Pilot studies for dredge material reuse (yr 1-7)

**Isolated Facility (Alt. 3);** *The isolated facility consists of a new canal or pipeline connecting the Sacramento River in the northern Delta to the SWP and CVP export facilities in the southern Delta. CALFED cannot totally preclude the potential of an isolated facility at this time. However, the presumption is that the isolated facility will not be implemented. The following Stage 1 actions provide progress on initial studies and permitting incase the isolated facility is found necessary to meet CALFED objectives.*

- Project environmental documentation (1-7)
- Feasibility studies (yr 1-6)
- Field and pilot studies (yr 1-6)
- 404(b)(1) analyses; project site screening (yr 1-6)
- Permits and operating agreements for isolated facility (yr 7+)